

AMENDMENTSAmendments to the Claims

Please amend the claims according to the following listing of the claims.

Listing of the claims

1. (currently amended) A bipolar plate for PEM fuel cells comprising a plastic structure having a surface zone including gas-transport channels, the plastic structure comprising a polymer blend which is filled with conductivity-enhancing carbon fillers and which includes at least two mutually nonmiscible blend polymers,

wherein the polymer blend includes at least one polyamide and at least one polyether ketone or polyether sulfone as blend polymers,

wherein the at least two blend polymers form a co-continuous structure and the carbon fillers are at a higher concentration in one of the blend polymers or in the phase between the blend polymers, or wherein a blend polymer in which the carbon fillers are at a higher concentration forms a continuously conductive matrix in which the at least one further blend polymer is intercalated, ~~and~~

wherein the polymer blend comprises from 35 to 90 wt% of blend polymers and from 10 to 65 wt% of carbon fillers, and

wherein the polymer blend contains as carbon fillers

from 1 to 30 wt% of conductive black,

from 5 to 60 wt% of carbon fibers, and

from 1 to 25 wt% of carbon nanotubes,
in each case based on the total weight of the polymer
blend.

2. (previously presented) The bipolar plate as claimed in claim 1, wherein the carbon fillers are selected from conductive black, graphite, carbon fibers, carbon nanotubes and mixtures thereof.
3. (cancelled)
4. ~~(cancelled) The bipolar plate as claimed in claim 3, wherein the polymer blend contains as carbon fillers~~
~~from 1 to 30 wt% of conductive black,~~
~~from 5 to 60 wt% of carbon fibers, and~~
~~from 0 to 25 wt% of carbon nanotubes,~~
~~the total amount of carbon fillers being from 6 to 70 wt%, in each case based on the total weight of the polymer blend.~~
5. (cancelled).
6. (cancelled).
7. (previously presented) The bipolar plate as claimed in claim 1, wherein the weight ratio, in the polymer blend, of polyamide to polyether ketone/polyether sulfone is from 1:8 to 8:1.
8. (previously presented) A method of fabricating bipolar plates as claimed in claim 1 by preparing and shaping the polymer blend filled with conductivity-enhancing carbon fillers.
9. (previously presented) A PEM fuel cell comprising bipolar plates as claimed in claim 1.

10. (cancelled)

11. (cancelled)